

Future Internet Infrastructure for Environmental Services, Sensors and Content Use cases

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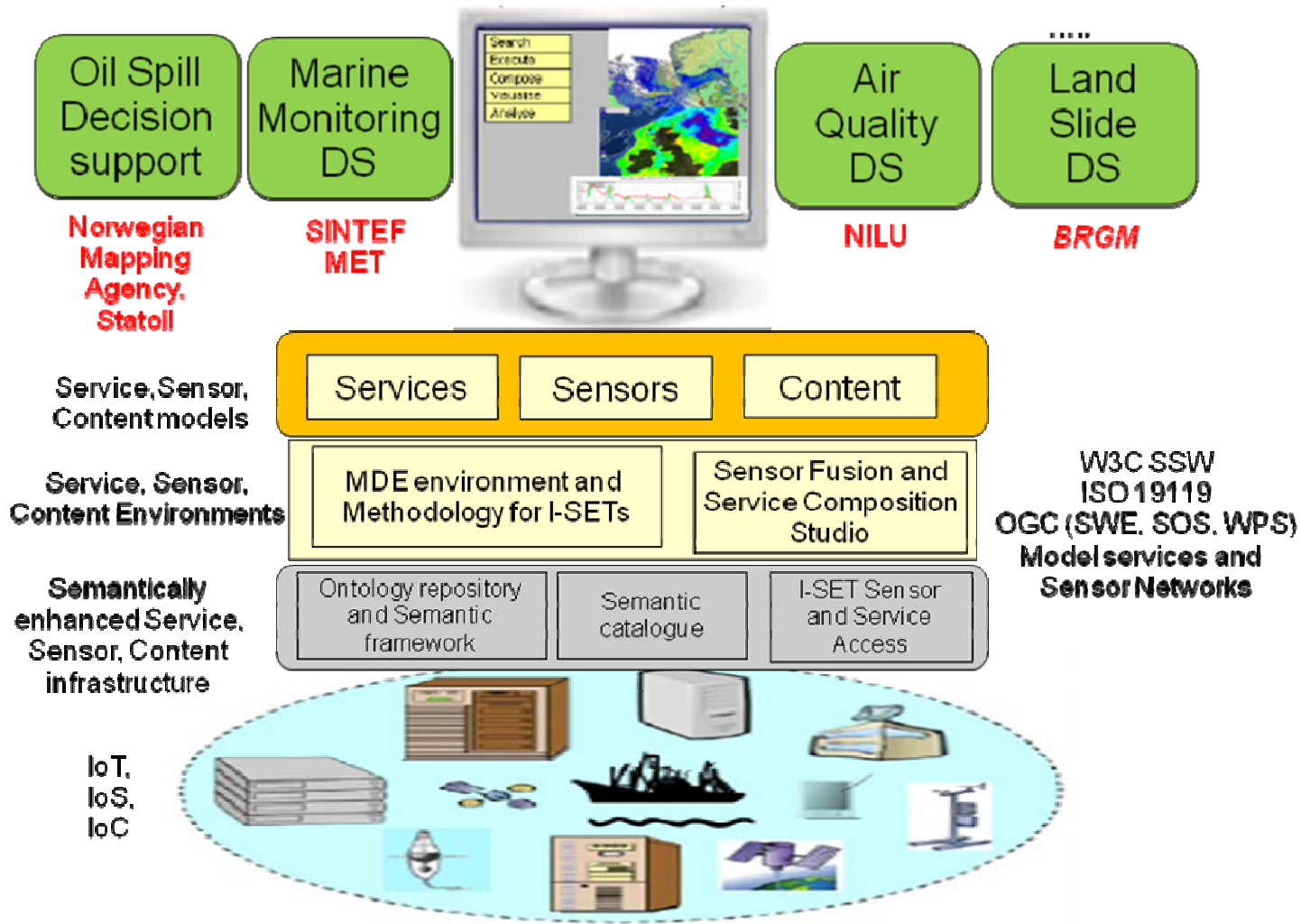
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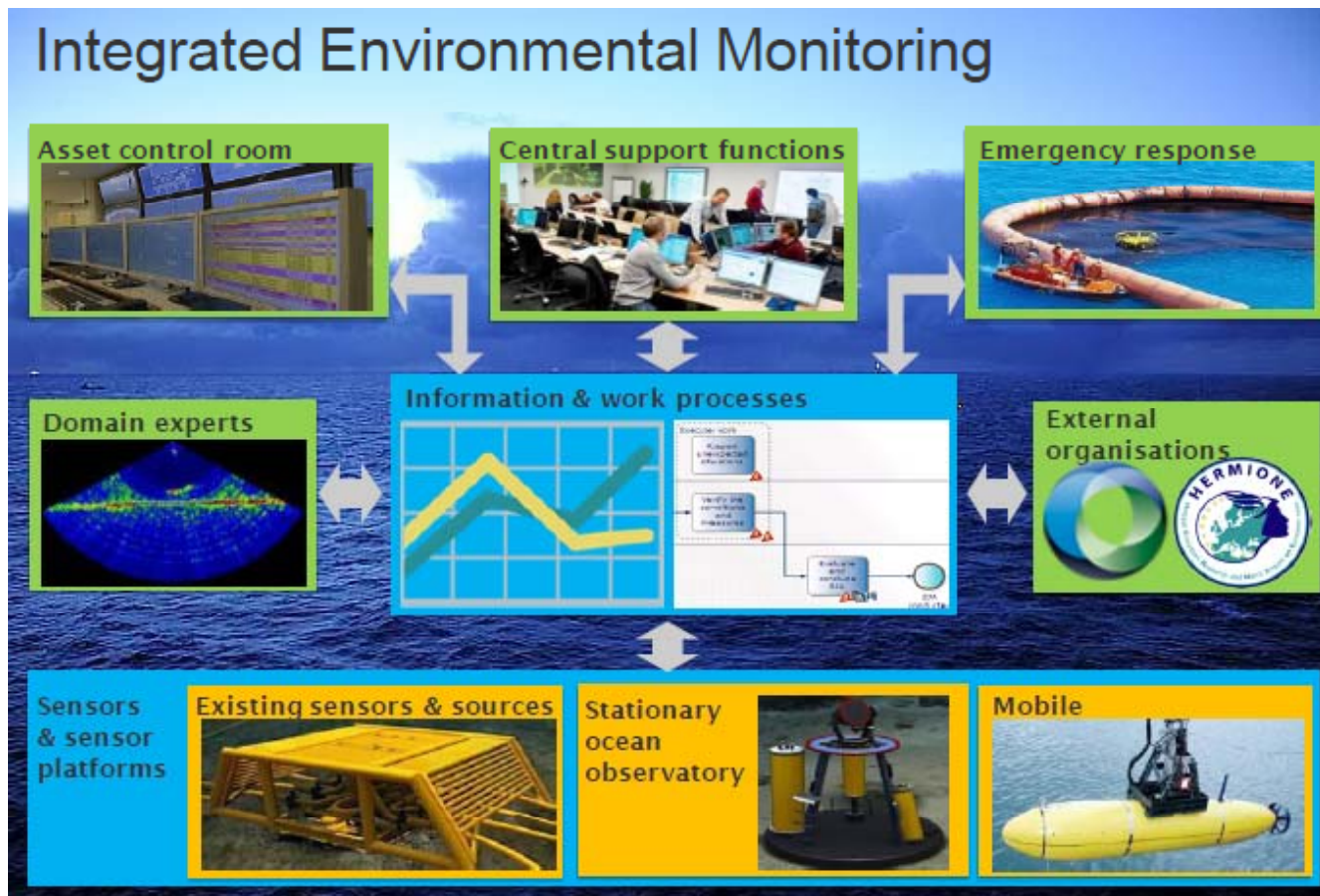
Background

- The ENVISION project, ENVIronmental Services Infrastructures with ONtologies, www.envision-project.eu , is one of seven projects aiming at meeting the requirements of objective 6.4, based on the use of an underlying internet based platform.
- Objective ICT-2009.6.4 ICT for Environmental Services and Climate Change and 6.4b on *Flexible discovery and chaining of distributed environmental services*
- Linked to the Single Information Space in Europe for the Environment (SISE) , the Shared Environmental Information System (SEIS), INSPIRE Directive and the Global Monitoring for Environment and Security (GMES) initiative

Use case and scenario for large-scale experimentation with the Future Internet



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Expected functionalities of Future Internet core technology platform

■ **Federated Open Trusted Platforms (FOTs)**

- Need for platforms which inter-connect, inter-operate and inter-work together
- Allow cost effective design, development and deployment of Environmental models and applications

■ **Internet of Services**

- Services need to seamlessly inter-connect and inter-work
- Flexibility, adaptability and configurability of services (adapt to individual needs)
- Software as Services (SaaS) is also central to the environmental models
- The core platform needs to be dependable, reliable, and secure

■ **Internet of Things**

- Standardised mechanisms for manageable sensors & actuators, sensor data storage and sensor fusion in order to provide the necessary quality of service.
- Availability through a core platform
- Integrated mechanisms for handling Event Driven Architectures.

■ **Internet of Networks**

- Integrate and bridge many different wireless and connected network infrastructure.

■ **Internet of Content**

- Support for simulation & efficient multi language search and retrieval
- Interoperability among various data sources (ontologies & semantic technologies)

SINTEF ICT Position Paper

SINTEF in FI-PPP, the Environment Area

- Knowledge base of end user and developer needs and requirements in an Environmental setting. Cooperation with industry (Statoil) and government.
- Knowledge base of the use of standards (ISO, OGC, OMG, OASIS, W3C, ...) and contributing to the same.
- Open source and standards based service platform for the development of an Environmental service infrastructure.
- Experience from developing environmental services and running long-term field evaluations.
- Results from empirically evaluating use of technology platforms on developers and methodology for doing such research.

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